

# AMERICAN JOURNAL OF PHYSIOLOGY®

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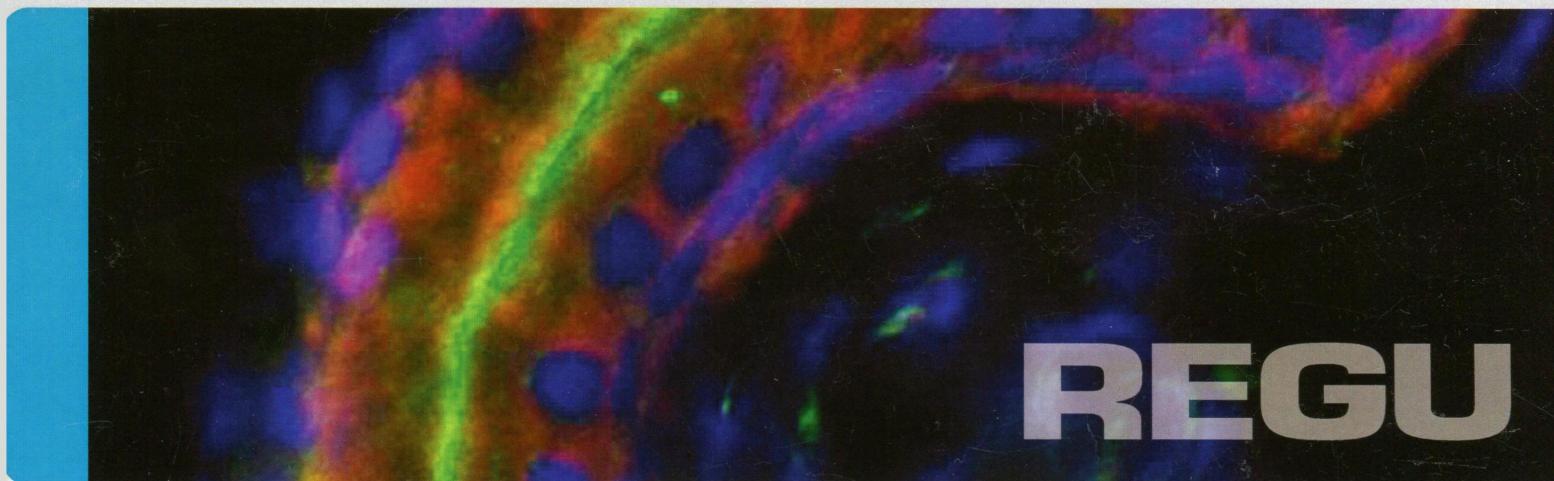
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December 2014

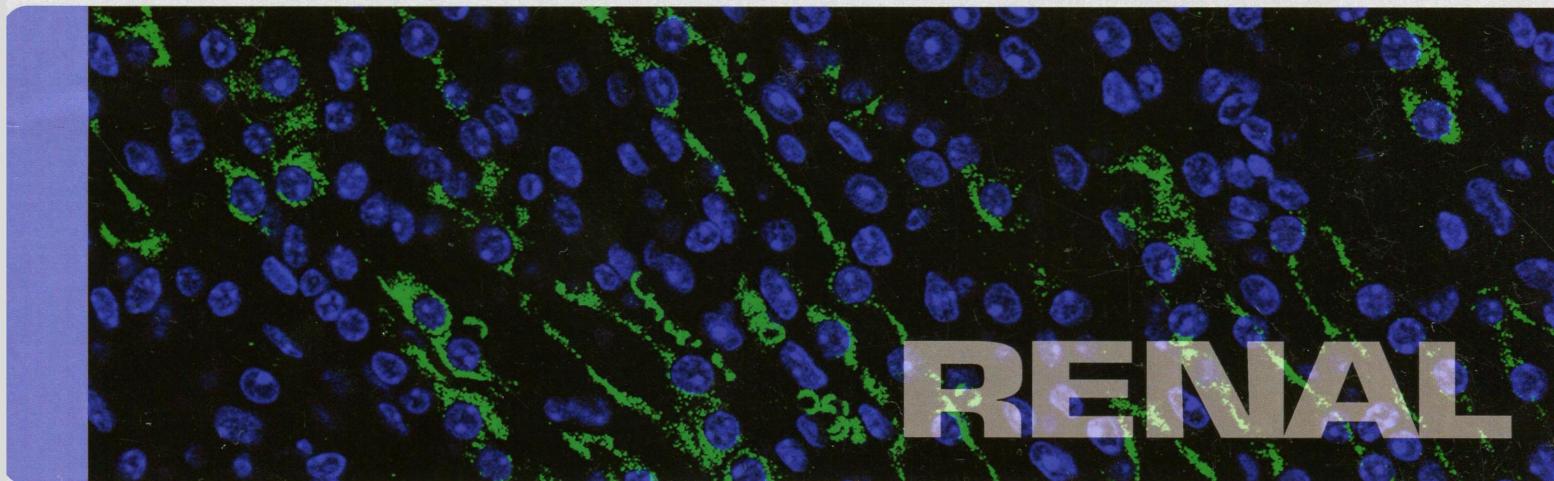
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# American Journal of Physiology- Heart and Circulatory Physiology

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## CALL FOR PAPERS Cardiovascular and Cerebrovascular Aging—New Mechanisms and Insights

Endogenous leptin contributes to baroreflex suppression within the solitary tract nucleus of aged rats

*A. C. Arnold and D. I. Diz*

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## VASCULAR BIOLOGY AND MICROCIRCULATION

Resolvin D1 reverses reactivity and  $\text{Ca}^{2+}$  sensitivity induced by ET-1, TNF- $\alpha$ , and IL-6 in the human pulmonary artery (**Translational Physiology**)

*R. Hiram, E. Rizcallah, C. Sirois, M. Sirois, C. Morin, S. Fortin, and E. Rousseau*

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*K. Sriram, M. Intaglietta, and D. M. Tartakovsky*

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*A. M. Beyer, M. J. Durand, J. Hockenberry, T. C. Gamblin, S. A. Phillips, and D. D. Guterman*

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## MUSCLE MECHANICS AND VENTRICULAR FUNCTION

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Effects of a myofilament calcium sensitizer on left ventricular systolic and diastolic function in rats with volume overload heart failure

*K. Wilson, A. Guggilam, T. A. West, X. Zhang, A. J. Trask, M. J. Cismowski, P. de Tombe, S. Sadayappan, and P. A. Lucchesi*

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*J. Li, E. J. Tanhehco, and B. Russell*

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Hydrogen gas attenuates embryonic gene expression and prevents left ventricular remodeling induced by intermittent hypoxia in cardiomyopathic hamsters

*R. Kato, A. Nomura, A. Sakamoto, Y. Yasuda, K. Amatani, S. Nagai, Y. Sen, Y. Ijiri, Y. Okada, T. Yamaguchi, Y. Izumi, M. Yoshiyama, K. Tanaka, and T. Hayashi*

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Central SDF-1/CXCL12 expression and its cardiovascular and sympathetic effects: the role of angiotensin II, TNF- $\alpha$ , and MAP kinase signaling

*S.-G. Wei, Z.-H. Zhang, Y. Yu, and R. B. Felder*

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## INTEGRATIVE CARDIOVASCULAR PHYSIOLOGY AND PATHOPHYSIOLOGY

Molecular basis for the improvement in muscle metaboreflex and mechanoreflex control in exercise-trained humans with chronic heart failure (**Translational Physiology**)

*L. M. Antunes-Correa, T. S. Nobre, R. V. Groehs, M. J. N. N. Alves, T. Fernandes, G. K. Couto, M. U. P. B. Rondon, P. Oliveira, M. Lima, W. Mathias, P. C. Brum, C. Mady, D. R. Almeida, L. V. Rossoni, E. M. Oliveira, H. R. Middlekauff, and C. E. Negrao*

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Thyrotropin-releasing hormone overexpression induces structural changes of the left ventricle in the normal rat heart

*M. L. Schuman, L. S. Peres Diaz, M. S. Landa, J. E. Toblli, G. Cao, A. L. Alvarez, S. Finkelman, C. J. Pirola, and S. I. García*

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*S.-A. Lee, H. Jiang, C. M. Trent, J. J. Yuen, S. Narayanasamy, R. W. Curley, Jr., E. H. Harrison, I. J. Goldberg, M. S. Maurer, and W. S. Blaner*

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## CALL FOR PAPERS Cardiovascular and Cerebrovascular Aging—New Mechanisms and Insights

Sirtuin 1 ablation in endothelial cells is associated with impaired angiogenesis and diastolic dysfunction

*J. Maizel, S. Xavier, J. Chen, C. H. S. Lin, R. Vasko, and M. S. Goligorsky*

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## CALL FOR PAPERS Autophagy in the Cardiovascular System

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*L. Haar, X. Ren, Y. Liu, S. E. Koch, J. Goines, M. Tranter, M. A. Engevik, M. Nieman, J. Rubinstein, and W. K. Jones*

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*C. J. Lockhart, A. J. McCann, R. A. Pinnock, P. K. Hamilton, M. T. Harbinson,  
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Restoration of intracellular ATP production in banked red blood cells improves inducible ATP export and suppresses RBC-endothelial adhesion

*B. S. Kirby, G. Hanna, H. C. Hendargo, and T. J. McMahon*

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Platelets, acting in part via P-selectin, mediate cytomegalovirus-induced microvascular dysfunction

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The SIRT1 activator SRT1720 reverses vascular endothelial dysfunction, excessive superoxide production, and inflammation with aging in mice

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ROCK-dependent ATP5D modulation contributes to the protection of notoginsenoside NR1 against ischemia-reperfusion-induced myocardial injury

*K. He, L. Yan, C.-S. Pan, Y.-Y. Liu, Y.-C. Cui, B.-H. Hu, X. Chang, Q. Li, K. Sun,  
X.-W. Mao, J.-Y. Fan, and J.-Y. Han*

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**CARDIAC EXCITATION AND CONTRACTION**

Light phase-restricted feeding slows basal heart rate to exaggerate the type-3 long QT syndrome phenotype in mice

*E. A. Schroder, D. E. Burgess, C. L. Manning, Y. Zhao, A. J. Moss, A. Patwardhan,  
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**INTEGRATIVE CARDIOVASCULAR PHYSIOLOGY AND PATHOPHYSIOLOGY**

A longitudinal comparison of hemodynamics and intraluminal thrombus deposition in abdominal aortic aneurysms

*A. Arzani, G.-Y. Suh, R. L. Dalman, and S. C. Shadden*

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Regulatory, Integrative and Comparative Physiology**

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Optogenetics, the intersection between physics and neuroscience: light stimulation of neurons in physiological conditions

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A. L. Alhadeff, M. R. Hayes, and H. J. Grill

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The repeated sit-to-stand maneuver is a superior method for cardiac baroreflex assessment: a comparison with the modified Oxford method and Valsalva maneuver

H. M. Horsman, Y. C. Tzeng, D. C. Galletly, and K. C. Peebles

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## FLUID AND ELECTROLYTE HOMEOSTASIS

Gene expression and cellular localization of ROMKs in the gills and kidney of Mozambique tilapia acclimated to fresh water with high potassium concentration

F. Furukawa, S. Watanabe, K. Kakumura, J. Hiroi, and T. Kaneko

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## OBESITY, DIABETES AND ENERGY HOMEOSTASIS

Torpor and hypothermia: reversed hysteresis of metabolic rate and body temperature

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Leptin receptor signaling in the lateral parabrachial nucleus contributes to the control of food intake

A. L. Alhadeff, M. R. Hayes, and H. J. Grill

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## CARDIOVASCULAR AND RENAL INTEGRATION

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H. M. Horsman, Y. C. Tzeng, D. C. Galletly, and K. C. Peebles

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Reduced uterine perfusion pressure induces hypertension in the pregnant mouse

S. Intapad, J. P. Warrington, F. T. Spradley, A. C. Palei, H. A. Drummond, M. J. Ryan, J. P. Granger, and B. T. Alexander

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Gene expression and cellular localization of ROMKs in the gills and kidney of Mozambique tilapia acclimated to fresh water with high potassium concentration

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Torpor and hypothermia: reversed hysteresis of metabolic rate and body temperature

F. Geiser, S. E. Currie, K. A. O'Shea, and S. M. Hiebert

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Morphological and functional characteristics of the kidney of cartilaginous fishes: with special reference to urea reabsorption

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## CALL FOR PAPERS Central Control of Fluid and Electrolyte Homeostasis

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Sensitization of sodium appetite: evidence for sustained molecular changes in the lamina terminalis

*S. W. Hurley, Z. Zhang, T. G. Beltz, B. Xue, and A. K. Johnson*

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### FLUID AND ELECTROLYTE HOMEOSTASIS

Sensitization of sodium appetite: evidence for sustained molecular changes in the lamina terminalis

*S. W. Hurley, Z. Zhang, T. G. Beltz, B. Xue, and A. K. Johnson*

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Effects of metabolic acidosis on intracellular pH responses in multiple cell types

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### OBESITY, DIABETES AND ENERGY HOMEOSTASIS

Monocarboxylate transporters 1 and 4: expression and regulation by PPAR $\alpha$  in ovine ruminal epithelial cells

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Shp2 signaling in POMC neurons is important for leptin's actions on blood pressure, energy balance, and glucose regulation

*J. M. do Carmo, A. A. da Silva, S. E. Ebaady, P. O. Sessums, R. S. Abraham, J. K. Elmquist, B. B. Lowell, and J. E. Hall*

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Fructose- and glucose-conditioned preferences in FVB mice: strain differences in post-oral sugar appetition

*A. Sclafani, S. Zukerman, and K. Ackroff*

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Dynamic and extensive metabolic state-dependent regulation of cytokine expression and circulating levels

*P. S. Petersen, X. Lei, M. M. Seldin, S. Rodriguez, M. S. Byerly, A. Wolfe, S. Whitlock, and G. W. Wong*

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### CARDIOVASCULAR AND RENAL INTEGRATION

Shp2 signaling in POMC neurons is important for leptin's actions on blood pressure, energy balance, and glucose regulation

*J. M. do Carmo, A. A. da Silva, S. E. Ebaady, P. O. Sessums, R. S. Abraham, J. K. Elmquist, B. B. Lowell, and J. E. Hall*

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Effects of chronic kidney disease on liver transport: quantitative intravital microscopy of fluorescein transport in the rat liver

*J. C. Ryan, K. W. Dunn, and B. S. Decker*

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The calcium stored in the sarcoplasmic reticulum acts as a safety mechanism in rainbow trout heart

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### HORMONES, REPRODUCTION AND DEVELOPMENT

Caffeine exposure alters cardiac gene expression in embryonic cardiomyocytes

*X. Fang, W. Mei, W. B. Barbazuk, S. A. Rivkees, and C. C. Wendler*

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### CALL FOR PAPERS Sex and Gender Differences in Renal Physiology

Gender differences in adenine-induced chronic kidney disease and cardiovascular complications in rats

*V. Diwan, D. Small, K. Kauter, G. C. Gobe, and L. Brown*

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### Novel Therapeutics In Renal Disease

Novel inhibitors of nuclear transport cause cell cycle arrest and decrease cyst growth in ADPKD associated with decreased CDK4 levels

*M. Tan, H. I. Wettersten, K. Chu, D. L. Huso, T. Watnick, S. Friedlander,  
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Urinary excretion pattern of exosomal aquaporin-2 in rats that received gentamicin

*A. Abdeen, H. Sonoda, R. El-Shawarby, S. Takahashi, and M. Ikeda*

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Dopamine D<sub>1</sub>-like receptors regulate the α<sub>1A</sub>-adrenergic receptor in human renal proximal tubule cells and D<sub>1</sub>-like dopamine receptor knockout mice

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C. S. Escano, Jr., P. Yu, X. Wang, D. R. Sibley, P. A. Jose, and V. A. M. Villar*

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Local pH domains regulate NHE3-mediated Na<sup>+</sup> reabsorption in the renal proximal tubule

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ASK1/p38 signaling in renal tubular epithelial cells promotes renal fibrosis in the mouse obstructed kidney

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Transcriptional regulation of human organic anion transporter 1 by B-cell CLL/lymphoma 6

*W. Wegner, G. Burkhardt, and M. Henjakovic*

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Diabetic nephropathy is resistant to oral L-arginine or L-citrulline supplementation

*H. You, T. Gao, T. K. Cooper, S. M. Morris, Jr., and A. S. Awad*

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## TRANSLATIONAL PHYSIOLOGY

Endothelial damage and vascular calcification in patients with chronic kidney disease

*S. Soriano, A. Carmona, F. Triviño, M. Rodriguez, M. Alvarez-Benito, A. Martín-Malo,  
M.-A. Alvarez-Lara, R. Ramírez, P. Aljama, and J. Carracedo*

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## TRANSLATIONAL PHYSIOLOGY

Combination of ACE inhibitor with nicorandil provides further protection in chronic kidney disease

*T. Shiraishi, Y. Tamura, K. Tamiguchi, M. Higaki, S. Ueda, T. Shima, M. Nagura,  
T. Nakagawa, R. J. Johnson, and S. Uchida*

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Cyclooxygenase-2, prostaglandin E<sub>2</sub>, and prostanoid receptor EP2 in fluid flow shear stress-mediated injury in the solitary kidney (*Translational Physiology*)

*T. Srivastava, U. S. Alon, P. A. Cudmore, B. Tarakji, A. Kats, R. E. Garola, R. S. Duncan, E. T. McCarthy, R. Sharma, M. L. Johnson, L. F. Bonewald, A. El-Meanawy, V. J. Savin, and M. Sharma*

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**Novel Therapeutics in Renal Diseases**

Exocyst Sec10 protects renal tubule cells from injury by EGFR/MAPK activation and effects on endocytosis

*B. Fogelgren, X. Zuo, J. M. Buonato, A. Vasilyev, J.-I. Baek, S. Y. Choi, M. F. Chacon-Heszele, A. Palmyre, N. Polgar, I. Drummond, K. M. Park, M. J. Lazzara, and J. H. Lipschutz*

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**Pathophysiology of Acute Kidney Injury**

Renal redox dysregulation in AKI: application for oxidative stress marker of AKI

*K. Kasuno, K. Shirakawa, H. Yoshida, K. Mori, H. Kimura, N. Takahashi, Y. Nobukawa, K. Shigemi, S. Tanabe, N. Yamada, T. Koshiji, F. Nogaki, H. Kusano, T. Ono, K. Uno, H. Nakamura, J. Yodoi, E. Muso, and M. Iwano*

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The slowing down of renal deterioration but acceleration of cardiac hypertrophy: is the estrogen receptor- $\alpha$  a hero or villain?

*B.-S. Huang, W.-L. Lee, and P.-H. Wang*

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Serelaxin reduces oxidative stress and asymmetric dimethylarginine in angiotensin II-induced hypertension

*J. M. Sasser, M. W. Cunningham, Jr., and C. Baylis*

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Thienoquinolines exert diuresis by strongly inhibiting UT-A urea transporters

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Transporters involved in renal excretion of *N*-carbamoylglutamate, an orphan drug to treat inborn *n*-acetylglutamate synthase deficiency

*E. Schwob, Y. Hagos, G. Burckhardt, and B. C. Burckhardt*

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Akt recruits Dab2 to albumin endocytosis in the proximal tubule

*K. Koral, H. Li, N. Ganesh, M. J. Birnbaum, K. R. Hallows, and E. Erkan*

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Repression of let-7 by transforming growth factor- $\beta_1$ -induced Lin28 upregulates collagen expression in glomerular mesangial cells under diabetic conditions

*J. T. Park, M. Kato, L. Lanting, N. Castro, B. Y. Nam, M. Wang, S.-W. Kang, and R. Natarajan*

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Extracellular nucleotides from dying cells act as molecular signals to promote wound repair in renal tubular injury

*S. Nakagawa, T. Omura, A. Yonezawa, I. Yano, T. Nakagawa, and K. Matsubara*

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Mesenchymal stem cells and a vitamin D receptor agonist additively suppress T helper 17 cells and the related inflammatory response in the kidney

*M. M. Duffy, B. A. McNicholas, D. A. Monaghan, S. A. Hanley, J. M. McMahon, J. Pindjakova, S. Alagesan, H. O. Fearnhead, and M. D. Griffin*

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*A. M. Kotb, T. Müller, J. Xie, B. Anand-Apte, K. Endlich, and N. Endlich*

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